

MEMBRANE PROBING SYSTEM

BACKGROUND OF THE INVENTION

5 The present invention relates to probe
assemblies of the type commonly used for testing
integrated circuits (IC) and, in particular, the present
invention relates to a membrane probing assembly having
contacts which scrub, in a locally controlled manner,
10 across the respective input/output conductors of each
device so as to reliably wipe clear the surface oxides
that are normally found on those conductors thereby
ensuring good electrical connection between the probing
assembly and each device.

15 The trend in electronic production has been
toward increasingly smaller geometries particularly in
integrated circuit technology wherein a very large number
of discrete circuit elements are fabricated on a single
substrate or "wafer." After fabrication, this wafer is
divided into a number of rectangular-shaped chips or
20 "dice" where each die presents a rectangular or other
regular arrangement of metallized contact pads through
which input/output connections are made. Although each
die is eventually packaged separately, for efficiency
sake, testing of the circuit formed on each die is pref-
25 erably performed while the dies are still joined together
on the wafer. One typical procedure is to support the
wafer on a flat stage or "chuck" and to move the wafer in
X, Y and Z directions relative to the head of the probing
assembly so that the contacts on the probing assembly
30 move from die to die for consecutive engagement with each
die. Respective signal, power and ground lines are run
to the probing assembly from the test instrumentation
thus enabling each circuit to be sequentially connected
to the test instrumentation.

35 One conventional type of probing assembly used
for testing integrated circuits provides contacts that
are configured as needle-like tips. These tips are